ADDENDUM NO. 8

TO

PLANS AND SPECIFICATIONS

FOR

PĀHOA PARK MASTER PLAN PHASE I JOB NO. PR-4234

AT

PĀHOA, PUNA, HAWAI'I COUNTY AND STATE OF HAWAI'I

NOTICE TO BIDDERS

The items listed below are made a part of the current contract and shall govern the work, taking precedence over the previously issued specifications and drawings governing the particular item of work mentioned.

REQUEST FOR INFORMATION/REQUEST FOR CLARIFICATION

1. QUESTION: How far is the utility connection point from the HELCO transformer? Is it to a riser pole or existing handhole/manhole?

RESPONSE: Nearest pole is within 50' of proposed location of service equipment. There are existing riser poles on the same side of street.

2. QUESTION: Per Addendum No. 6, sheet EPC101 note 5. (2) 4" to telephone distribution pole. Refer to sheet E-101. Could not find any distribution pole on E-101, Can you provide? Will we need to run any underground conduits are new handholes required?

RESPONSE: Distribution will come from the same location as service entrance utility pole. Underground conduits can run in the same trench as electrical conduits and are indicated on trench sections.

3. QUESTION: Per Addendum No. 7 proposal Alternate No. 5 (Deductive). Item 2 asks to relocate Panel "CSH" to Covered Multi-Purpose Bldg. Do we also need to relocate XFMR "CSL", Panel "CSL", and LC4? If so to what location? If panels and XFMR is to be relocated do we extend the existing 200 amp feeder cables and branch wiring to the new location? What about voltage drop, conduit, and wire size? Do we need to upgrade feeder and branch wiring for the Skate park and parking lot lighting circuits? How do we incorporate the changes or which bid item do we use if the Comfort Station is omitted and the feeder and branch wiring needs to be extended.

RESPONSE: Panel CSH and LC4 would require relocation. If the building is removed, there is no need for the transformer and panel CSL. Circuits associated with panel CSH and LC4 would be required to be extended to the Covered Multi-Purpose Building. Feeder circuits would be required to be extended to the Covered Multi-Purpose Building. Upgrade LC4 circuits to #8 wire with a #10 ground. Parking lot circuits are sized sufficiently. Upsize feeder conduits to #300KCMIL and a #3 ground.

4. QUESTION: How will the concession stand and restrooms receive fire alarm coverage? No design shown, is it required? **RESPONSE:** No fire alarm required for the concession booth and comfort station. **SPECIFICATIONS** ITEM NO. 1 - Section 02821 - CHAIN LINK FENCES AND GATES **DELETE** in its entirety and **REPLACE** with attached, seven (7) pages. ITEM NO. 2 - Section 07840 - FIRESTOPPING **DELETE** in its entirety, five (5) pages. ITEM NO. 3 – Section 16120 – CONDUCTORS AND CABLES **DELETE** in its entirety and **REPLACE** with attached, three (3) pages. **DRAWINGS** ITEM NO. 1 – SHEET PC511 Section A1 ROLL-UP GYM DIVIDER, DELETE call out "FIREPROOF COATING SYSTEM (TYP.)". **DELETE** in its entirety Drawing Sheets: C-008, C-012, C-103, C-107, PC102, PC513, PC514, A-504, S-AX201, S-AX202, EGI008 and **REPLACE** with attached revised eleven (11) sheets. Warren H. W. Lee, P.E., Director Department of Public Works County of Hawai' Date Issued: May 14, 2014 Please detach and execute the receipt below. Return immediately via facsimile (808) 961-8630 or mail to the Administration Office, Department of Public Works, County of Hawai'i at Aupuni Center, 101 Pauahi Street, Suite 7, Hilo, HI 96720-4224. Receipt of Addendum No. 8 via website for the PĀHOA PARK MASTER PLAN PHASE I, Job No. PR-4234, Pāhoa, Puna, Hawai'i, is hereby acknowledged. Signed _____ Title _____

PĀHOA PARK MASTER PLAN PHASE I JOB NO. PR-4234 Date ____

<u>SECTION 02821 – CHAIN LINK FENCES AND GATES</u>

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

As specified in Section 00700.

1.02 GENERAL REQUIREMENTS

Furnish materials, labor, and equipment necessary to install all chain link fences and gates to the limits shown and as detailed on the plan and as specified herein. All materials shall be new, specifically purchased for this project.

1.03 SUMMARY

A. Section Includes:

- 1. Fence framework, fabric, and accessories.
- 2. Excavation for post bases.
- 3. Concrete foundation for posts and center drop for gates.
- 4. Manual gates and related hardware.
- 5. Gate locking devices.

B. Related Sections:

- 1. Division 3: Concrete: Concrete foundation and grout.
- 2. Division 5: Metal flanges and anchor bolts.

1.04 DEFINITIONS

- A. Terminology shall be as defined in CLFMI-Product Manual.
- B. Additional terminology shall be as defined in ASTM F552.

1.05 SYSTEM DESCRIPTIONS

- A. Fence Height: 6 feet nominal, unless indicated otherwise on drawings.
- B. Line Post Spacing: As indicated on drawings, at intervals maximum 10 feet.
- C. Fence Post and Rail Strength: Conform to ASTM F1043 "Heavy Industrial Fence" quality.
- D. Manual gates.

1.06 <u>SUBMITTALS</u>

- A. Shop Drawings: Indicate plan layout, spacing of components, post foundation dimensions, and schedule of components.
- B. Product Data: Submit data on fabric, posts, accessories, and fittings.

- C. Samples: Submit samples of fence fabric illustrating construction and colored finish.
- D. Manufacturer's Installation Instructions: Submit installation requirements.

1.07 CLOSEOUT SUBMITTALS

Project Record Documents: Accurately record actual locations of property perimeter posts relative to property lines or easements.

1.08 QUALITY ASSURANCE

- A. Supply material in accordance with CLFMI -Product Manual.
- B. Perform installation in accordance with ASTM F567.
- C. Maintain one copy of each document on site.

1.09 **QUALIFICATIONS**

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three 3 years experience.
- B. Installer: Company specializing in performing work of this section with minimum three (3) years experience.

1.10 DELIVERY STORAGE AND HANDLING

- A. Deliver, store, protect and handle products with adequate protection against damage.
- B. Deliver fence fabric and accessories in packed cartons or firmly tied rolls.
- C. Identify each package with manufacturer's name.
- D. Store fence fabric and accessories in secure and dry place.

1.11 COORDINATION

Coordinate work with work of others.

1.12 WARRANTY

Provide warranty for minimum two (2) years for chain link fence installation. Include coverage for PVC coating against delaminating, cracking, crazing, blistering, peeling, chalking or fading.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Anchor Fence Inc.
- B. Cyclone Inc.
- C. Merchants Metals Division of MMI Products, Inc., or approved equal.

2.02 MATERIALS

- A. Covered PlayCourt Chain Link Fence Fabric shall be 5/8-inch mesh, 9ga core, 8ga finish PVC fuse bonded, galvanized and conform to ASTM A392, Class 1. The hot-dipped galvanized fabric shall contain not less than 1.2 ounces per sq. ft. of uncoated wire surface as determined by stripping test ASTM A90 and under the PREECE Test (ASTM A239), shall withstand 6 or more 1-minute dips before reaching the end point. All fabric shall be free from barbs, icicles, or other hazardous projections resulting from galvanizing. PVC color shall be green.
- B. <u>Site & Athletic Field Chain Link Fence Fabric</u>: Hot-dip galvanized and conforms to ASTM A392, Class 1. Fabric may be standard Chain Link, 9 ga. 2" square mesh. Acceptable alternative coating to hot dipped galvanized fabric shall be Aluminum clad fabric conforming to ASTM A491.
- C. <u>Tie Wire</u> shall be 9 gauge (9 gauge for gates) soft aluminum wire as called for on plans.
- D. <u>Tension Bar</u> shall be 1/4" thick by 3/4" wide galvanized mild steel bar for attachment of fabric to terminal posts.
- E. Brace Band shall be formed from galvanized steel bands at least 1/8" thick by 3/4" wide.
- F. <u>Tension Band</u> shall be formed from galvanized steel bands at least 12 gauge thick by 3/4" wide.
- G. <u>Tension Rod</u> shall be a 3/8" dia. mild steel galvanized rod threaded at one end and hooked 180 degrees at the other.

H. Fittings:

- 1. <u>Post Cap and Eye Top</u> shall be of one-piece hot-dip galvanized cast iron construction and shall attach securely onto their respective posts.
- 2. <u>Coupling</u> for top rails shall be outside sleeve type, galvanized, at least 6 inches long and crimped at center.
- 3. <u>Rail Ends</u> shall be snug, one-piece fittings for top and brace rails with holes to receive 5/16" bolts for securing to rail end bands.
- 4. <u>Double Rail End</u> shall be similar to rail end except for an additional ½" hole to receive the hooked end of a tension rod.

- I. Composition and Finish of Metal Parts: All metal parts and fittings, including tracks, gate hardware and frames, shall be of steel, malleable iron or wrought iron, and shall be galvanized by the hot-dip process, after fabrication, in conformance with ASTM A153. The coating on all parts shall be continuous and smooth; that is, free from barbs, icicles, or other projections. Bolts may be cadmium-plated in conformance with ASTM A165 instead.
- J. <u>Posts, Rails, and Braces</u> shall be of standard weight, hot-dipped galvanized, welded and seamless steel pipes conforming to ASTM A120. Size, length, and painted as shown on the drawings, or when not indicated there on, as specified in section 54, Chain-link Fence, in the Standard Specifications for PW Construction.
- K. Tension Wire shall be of 7-gauge coiled spring galvanized wire.

2.03 <u>SITE AND ATHLETIC FIELD COMPONENTS</u>

- A. <u>Site and Athletic Field Line Posts:</u> Per C&C of Honolulu Department of Parks and Recreation standard details
- B. <u>Site and Athletic Field Corner and Terminal Posts</u>: Per C&C of Honolulu Department of Parks and Recreation standard details
- C. <u>Site and Athletic Field Top, Intermediate and Bottom Rail:</u> Per C&C of Honolulu Department of Parks and Recreation standard details
- D. <u>Site and Athletic Field Tension Wire:</u> Per C&C of Honolulu Department of Parks and Recreation standard details
- E. <u>Site and Athletic Field Stretcher Bar:</u> Per C&C of Honolulu Department of Parks and Recreation standard details
- F. <u>Site and Athletic Field Truss Rod with Turnbuckle:</u> Per C&C of Honolulu Department of Parks and Recreation standard details
- G. <u>Site and Athletic Field Tie Wire</u>: Per C&C of Honolulu Department of Parks and Recreation standard details

2.04 COVERED PLAYCOURT COMPONENTS

A. All posts, rails, wires, bars and turnbuckles for the construction of the chain link fencing at the Covered Playcourt shall be as indicated on drawings.

2.05 ACCESSORIES

- A. Caps: Ball type, cast steel galvanized, or malleable iron galvanized, size to post diameter, set screw retainer.
- B. Fittings: Sleeves, bands, clips, rail ends, tension bars, fasteners and fittings; galvanized steel.
- C. Gate Hardware: Center gate stop and drop rod, gate hinges for each leaf and hardware for padlock.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.
- B. Beginning of work means installer accepts existing surface and substrate conditions.

3.02 INSTALLATION AND WORKMANSHIP

A. General:

- 1. Install framework, fabric, accessories and gates in accordance with ASTM F567 and as noted on drawings.
- 2. Metal fencing and gates of the various types called for shall be erected in strict conformance with the plans and these specifications. The gates and hardware shall provide intended freedom of operation. Posts shall be plumb and in-line. Welding shall be done in accordance with latest AWS standards. However, no splicing of posts, rails, or braces shall be accepted. Where changes in-line occur with an angle of deflection of 30 degrees or more, the change point will be considered a corner and a corner post shall be installed thereat. End, corner, and gate posts for fences with 5-foot and wider fabric shall be braced to the nearest line post with horizontal braces and tension rods. The horizontal braces shall be spaced midway between top rail and ground and securely fastened to posts as shown on plans. Where fencing is placed along a curve with radius of 50 feet or less, horizontal braces (and tension rods) shall be installed between all posts in like manner. Pull posts, at maximum intervals of 100 feet, shall be braced and trussed in both directions as specified above.
- 3. <u>Field Touch-Ups:</u> Field welds shall be cleaned of flux and spatter and all damaged galvanizing removed, all hazardous projections ground off, properly prepared, and then heavily coated with self-curing inorganic zinc coating. Manufactured coatings shall be applied in strict accordance with manufacturer's printed specifications. Damage to existing painted surfaces shall be touched up.

B. Post and Rail Installation:

- 1. Fence posts, except as otherwise indicated or specified per the Architectural drawings, shall be spaced not more than 10 feet apart. In curved fence sections having a radius of 50 feet or less, the posts shall be placed as shown on the plans. Line posts shall be set so that top of the eye tops shall be at the same height as the fence fabric. Post caps shall be secured in place either by spot welding, S.S. tamper proof set screw, or S.S. setting pin.
- 2. Allow concrete to cure for minimum seven (7) days before installing fabric and other materials attached to posts.
- 3. Install posts with 6 inches maximum clear opening from end posts to buildings, fences and other structures, unless indicated otherwise.

- 4. Set intermediate and terminal posts plumb in concrete footings or concrete walls, as shown on drawings.
- 5. Line Post Footing Depth Below Finish Grade: Follow ASTM F567, unless indicated otherwise.
- 6. Corner and Terminal Post Footing Depth Below Finish Grade: Follow ASTM F567, unless indicated otherwise.
- 7. Top rails shall pass through and bear firmly on base of eye tops, form a continuous brace from end to end of each stretch of fence, and be securely fastened to terminal posts with rail ends and brace bands. Coupling for the top rails shall be installed at intervals of 24 feet maximum.
- 8. Install center and bottom brace rail on corner gate leaves.
- 9. Brace each gate and corner post to adjacent line post with horizontal center brace rail and diagonal truss rods. Install brace rail one bay from end and gate posts.
- 10. Install top rail through line post tops and splice with 6 inch long rail sleeves.
- 11. Install bottom rail through line post and splice with 6 inch long rail sleeves.

C. Chain-Link Fabric Installation:

- 1. Chain link fabric shall be fastened on the side of the posts as designated, and shall be mounted on the posts so that the bottom of the fabric will be no more above the finished grade than called for on the plans. High points of the ground shall be excavated as necessary. The fabric shall be stretched taut and securely fastened to the posts. Ends of wire ties shall be bent back so as not to be a hazard. Between posts the top edge of the fabric shall be fastened to the top rail and the lower edge to the tension wire with tie wire of size and at spacing as called for on the plans. Tension wire shall be stretched tight and shall be installed in a straight line between posts. Tension bars extending the full height of the fence, and tension bar bands shall be used for fastening fabric to end, corner, pull, and gate posts. Bolted tension bar bands shall be placed at top and bottom of tension bars and spaced at 14-inch intervals max. Fastenings to line posts shall be made with tie wire of size and spacing as called for on the plans.
- 2. Do not stretch fabric until grout for sleeves has cured 14 days.
- 3. Stretch fabric between terminal posts or at intervals of 100 feet maximum, whichever is less.
- 4. Fasten fabric to top, intermediate and bottom rails, line posts, truss rods, stretcher bars and with tie wire at maximum 15 inches on centers, unless shown otherwise.
- 5. Attach fabric to end and corner posts with stretcher bars and stretcher bar clips.

3.03 <u>ERECTION TOLERANCES</u>

- A. Maximum Variation From Plumb: 1/4 inch.
- B. Maximum Offset From Indicated Position: 1 inch.
- C. Minimum distance from property line: 6 inches.

3.04 ADJUSTING

Adjust gates for smooth and balanced operation.

3.05 FINAL CLEAN-UP

All exposed metal surfaces shall be clean and free of cement. All surplus earth resulting from metal fencing work that is not used in the grading work shall be cleaned up and disposed of at location specified on plans. All debris resulting from work of this section shall be removed from the site.

END OF SECTION

<u>SECTION 16120 – CONDUCTORS AND CABLES</u>

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

As specified in Section 00700

1.02 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Building wires and cables rated 600 V and less.
 - 2. Connectors, splices, and terminations rated 600 V and less.

1.03 <u>DEFINITIONS</u>

- A. EPDM: Ethylene-propylene-diene terpolymer rubber.
- B. NBR: Acrylonitrile-butadiene rubber.
- C. MC Metal Clad Cable

1.04 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.01 <u>CONDUCTORS AND CABLES</u>

- A. Conductors shall be annealed copper with conductivity of no less than 98% pure copper with compact stranding, Type AA-8000.
- B. Copper Conductors: Comply with NEMA WC 70.
- C. Conductor Insulation: Comply with NEMA WC 70 for Types THHN-THWN XHHW and SO.
- D. Metal Clad Cable: Solid copper conductor, 600 volt insulation rated 90°C in a galvanized steel interlocking armor.
- E. PVC Coated Metal Clad Cable: Solid copper conductors, 600V insulation rated 90°C in PVC coated steel interlocking armor.

2.02 <u>CONNECTORS AND SPLICES</u>

Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

PART 3 - EXECUTION

3.01 CONDUCTOR MATERIAL APPLICATIONS

- A. Feeders: Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger, except as indicated below.
 - Use standard conductors for control circuits.
 - 2. Use conductor not smaller than 14 AWG for control circuits.
 - 3. Use 10 AWG conductors for 20 ampere, 120 volt branch circuits longer than 75 feet (25 m).
 - 4. Use 10 AWG conductors for 20 ampere, 277 volt branch circuits longer than 200 feet (160 m).
- B. Branch Circuits: Copper. Minimum size #12 AWG; solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

3.02 <u>CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS</u>

- A. Service Entrance: Type THHN-THWN, single conductors in raceway Type XHHW, single conductors in raceway.
- B. Exposed Feeders: Type THHN-THWN, single conductors in raceway.
- C. Feeders Concealed in Ceilings, Walls, Partitions, below raised floors and Crawlspaces: Type THHN-THWN, single conductors in raceway
- D. Feeders Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN-THWN, single conductors in raceway.
- E. Exposed Branch Circuits, Including in Crawlspaces: Type THHN-THWN, single conductors in raceway on the MC Cable in sizes #6 AWG and smaller.
- F. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN-THWN single conductors in raceway or type MC Cable in sizes #6 AWG and smaller.
- G. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN-THWN, single conductors in raceway or PVC coated type MC Cable in sizes #6 and smaller (in concrete slabs only).

3.03 INSTALLATION OF CONDUCTORS AND CABLES

- A. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- B. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- C. Identify and color-code conductors and cables according to Division 16 Section "Electrical Identification."
- D. Feeders Larger than 6 AWG: Copper, stranded conductor, 600 volt insulation, THHN/THWN, or XHHW. Use no wire smaller than 12 AWG for power and lighting circuits, and no wire smaller than 16 AWG for control wiring.
- E. Utilize 10 AWG conductor for 20 ampere, 120 volt branch circuit homeruns longer than 75 feet (23m), and for 20 ampere, 277 volt branch circuit homeruns longer than 200 feet (61m).

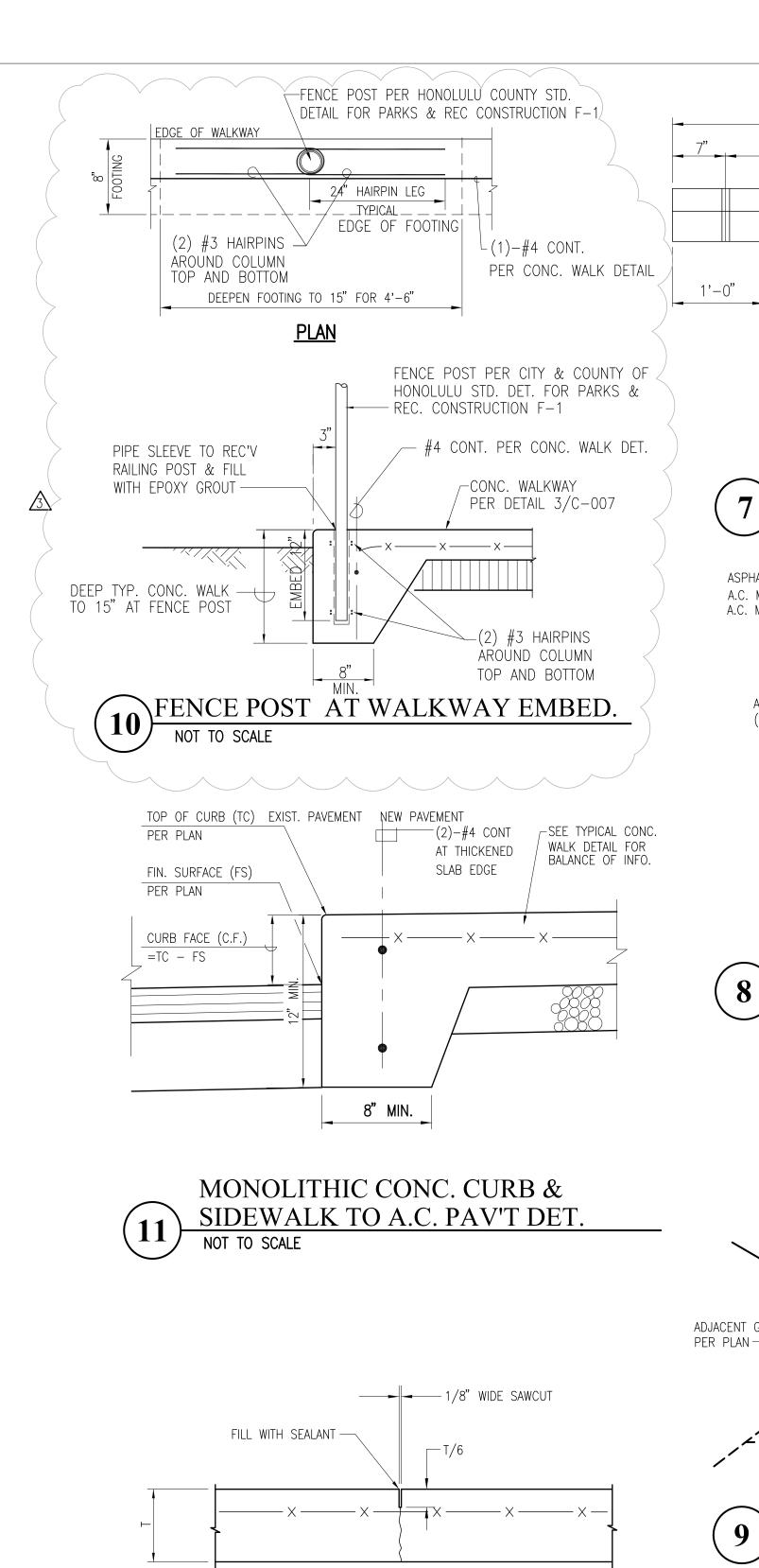
3.04 CONNECTIONS

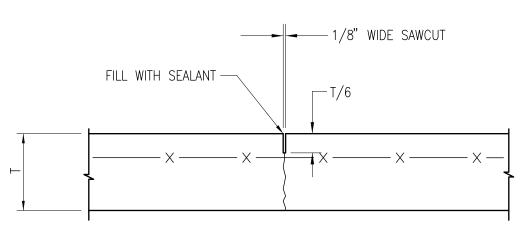
- A. Tighten electrical connectors and terminals according to manufacturer's published torquetightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- B. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
- C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches (150 mm) of slack.

3.05 FIELD QUALITY CONTROLS

- A. Tests and Inspections:
 - 1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors, for compliance with requirements.
 - 2. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
- B. Test Reports: Prepare a written report to record the following:
 - 1. Test procedures used.
 - 2. Test results that comply with requirements.
 - 3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.
- C. Remove and replace malfunctioning units and retest as specified above.

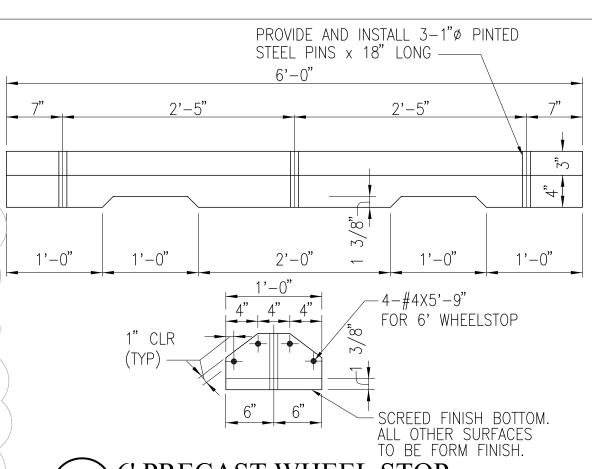
END OF SECTION



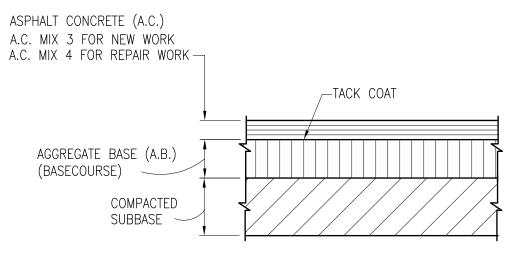


U.O.N. CRACK CONTROL JOINTS (CCJ) SHALL BE SPACED TO CREATE SQUARE PATTERN, I.E. 5' WIDE SIDEWALK SHALL BE SAWCUT AT 5' O.C.

CRACK CONTROL JOINT (CCJ)



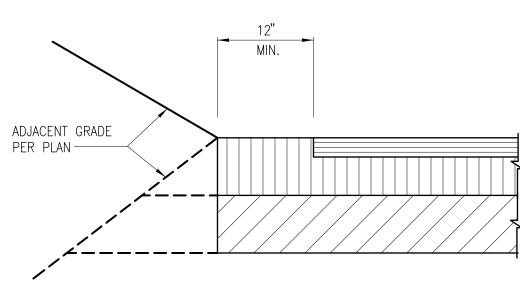
6' PRECAST WHEEL STOP SCALE: NOT TO SCALE



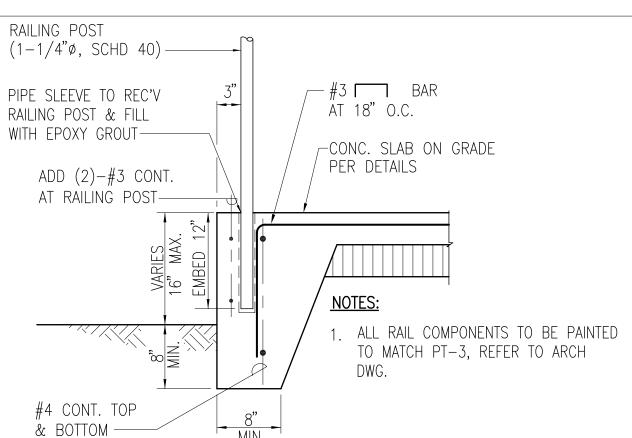
THICKNESSES OF A.C., A.B., AND SUBGRADE PER PLAN U.O.N. MINIMUM PAVEMENT SECTION SHALL BE 2"A.C./4"A.B. ON 95% COMPACTED SUBGRADE.

FOR WORK WITHIN COUNTY R.O.W., SUBBASE SHALL BE 6" THICK MINIMUM OR AS SPECIFIED BY THE ENGINEER

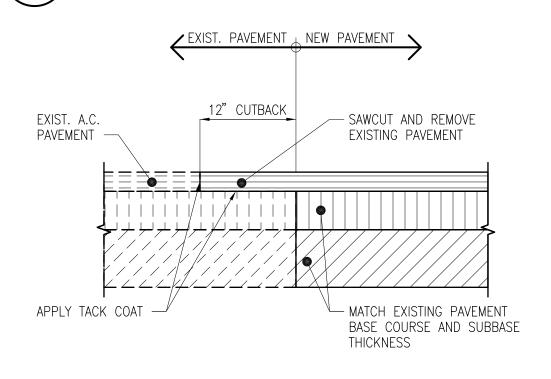
TYP. AC. PAV'T SECTION NOT TO SCALE



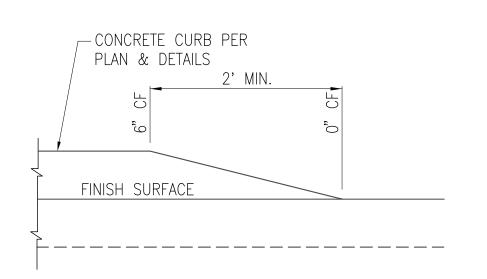
EDGE OF PAV'T DETAIL



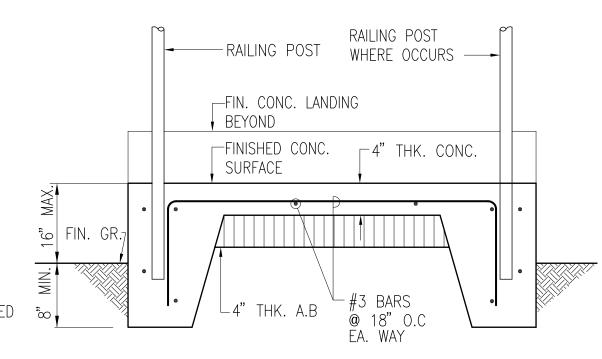
RAILING POST EMBEDMENT NOT TO SCALE



NEW TO EXIST. PAV'T DETAIL NOT TO SCALE

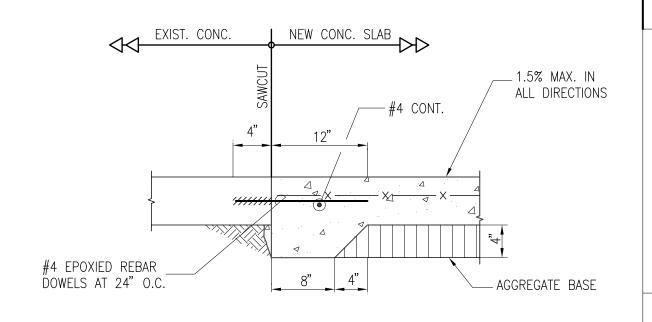


CONCRETE CURB TERMINATION NOT TO SCALE



1. ALL RAIL COMPONENTS TO BE PAINTED TO MATCH PT-3, REFER TO ARCH

TYPICAL ADA RAMP DETAIL NOT TO SCALE

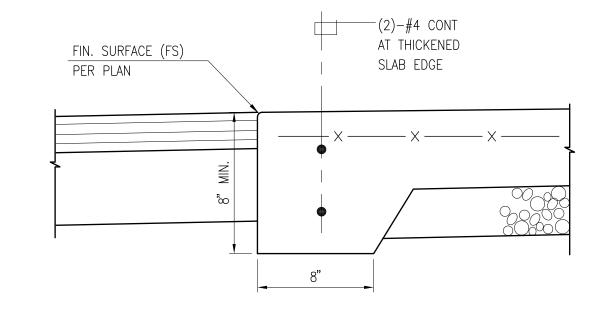


NOTES:

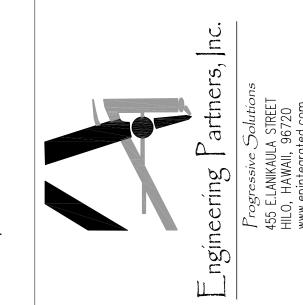
U.O.N. MINIMUM REQUIREMENTS SHALL BE: 1. CONCRETE SHALL BE CLASS "A". T1=> 4".

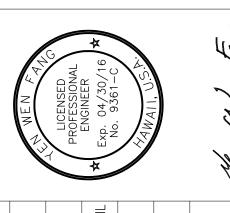
2. AGGREGATE CUSHION FILL SHALL BE ASTM C33 NO. 67. T2=> 4". 3. REINFORCING SHALL BE GALVANIZED 6"x6" 10/10 (6"x6" W1.4xW1.4) WWM.

NEW CONCRETE TO EXISTING CONCRETE NOT TO SCALE



FLUSH CONCRETE TO A.C. PAVEMENT DETAIL NOT TO SCALE

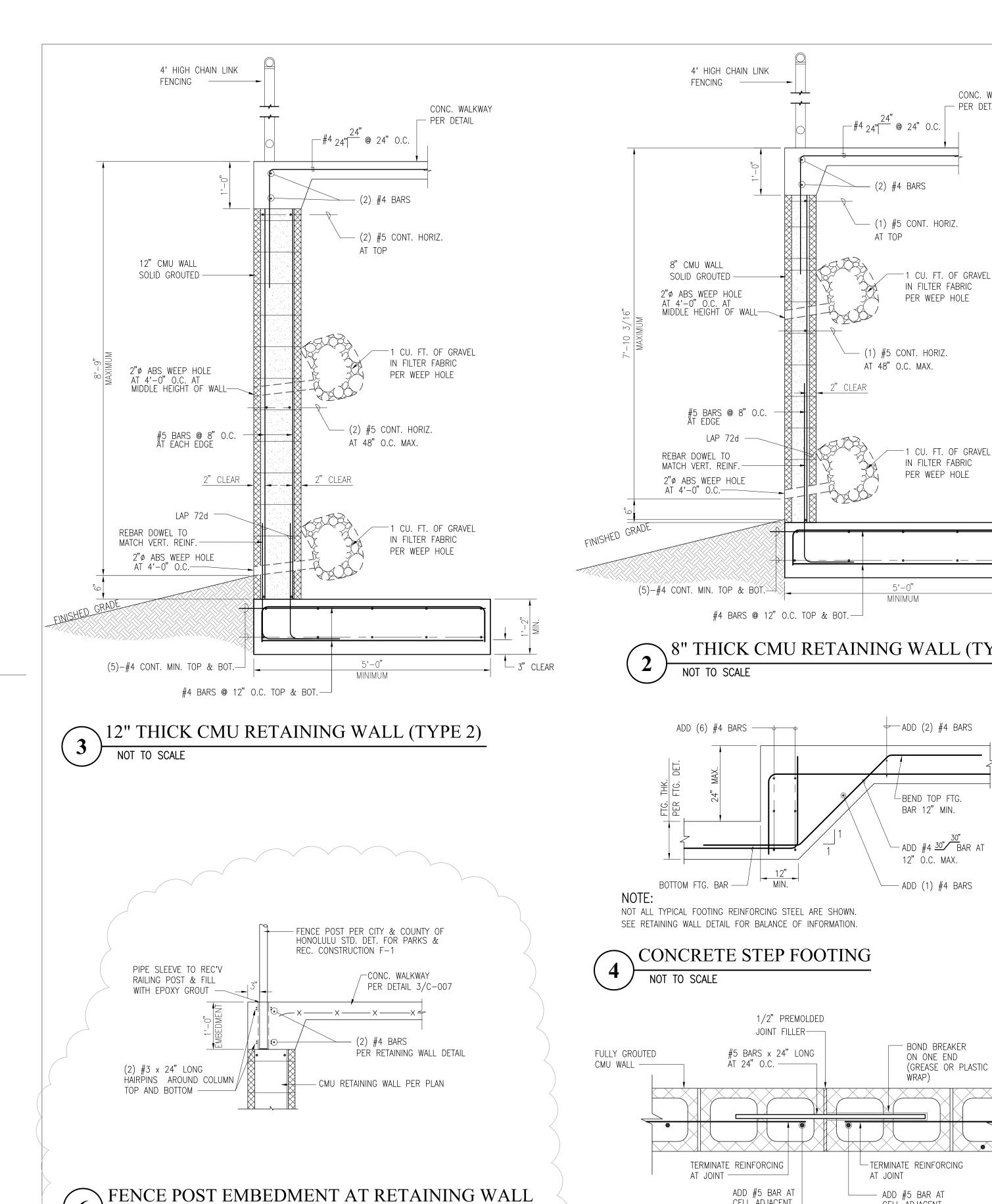




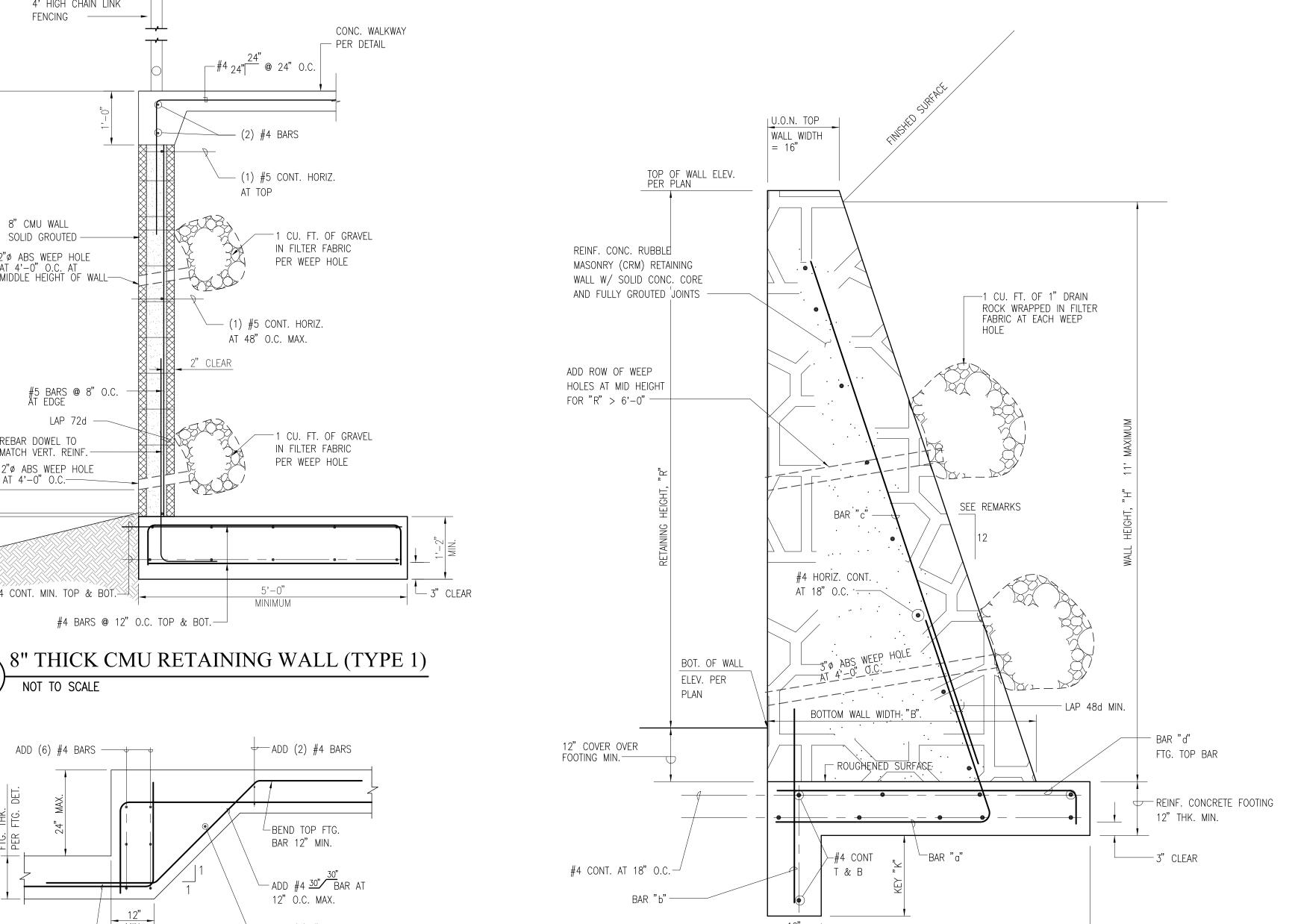
	REVIEWED:
5/13/14 ADD. 8- ADDED FENCING EMBED. DETAIL	
7/14 ADDENDUM #6	\$ 5/07/14
4/10/14 MULTIPLE CHANGES TO SHEET	A 4/10,

DEPARTMENT OF PARKS & RECREATION
101 PAUAHI STREET; SUITE 6 / HILO, HAWAII 96720 / PHONE: 808.961.8311 / FAX: 808.961.8411
NA IL PATER DI ANI
BID SUBMITTAL 2014-02-10
PAHOA, PUNA, HAWAII TMK: (3) 1-5-002:020

	101		_	PHASE	JOB NO.: PR-4234	H L C
HO	YWF	NO.	000) 	SHEETS	
~ BY:	(ED BY:	SHEET NO.		ر ر	J0	



NOT TO SCALE



MAX. RETAINING HEIGHT "R"	WALL HEIGHT "H"	FOOTING WIDTH "W"	BOTTOM WALL WIDTH "B"	KEY DEPTH "K"	BAR "a"	BAR "b"	BAR "c"	BAR "d"	REMARKS
10'	11'	7'-9"	6'-0"	18"	#5 @ 12"	#4x48" @ 12"	#5 @ 12"	#5 @ 12"	5 : 12 BATTERED
8'	9'	6'-4"	4'-4"	12"	#5 @ 18"	#4x42" @ 12"	#5 @ 18"	#5 @ 18"	4 : 12 BATTERED
6'	7'	5'-0"	3'-8"	12"	#4 @ 18"	#4x42" @ 12"	#4 @ 18"	#5 @ 18"	4 : 12 BATTERED
4'	5'	3'-6"	2'-8"	12"	#4 @ 18"	#4x42" @ 18"	#4 @ 18"	#4 @ 18"	4 : 12 BATTERED
2'	3'	2'-6"	2'-0"	4"	#4 @ 18"	N.R.	N.R.	#4 @ 18"	4 : 12 BATTERED

FOOTING WIDTH, "W"



— ADD #5 BAR AT

TO JOINT

CELL "ADJACENT

CELL "ADJACENT

CMU WALL EXPANSION JOINT

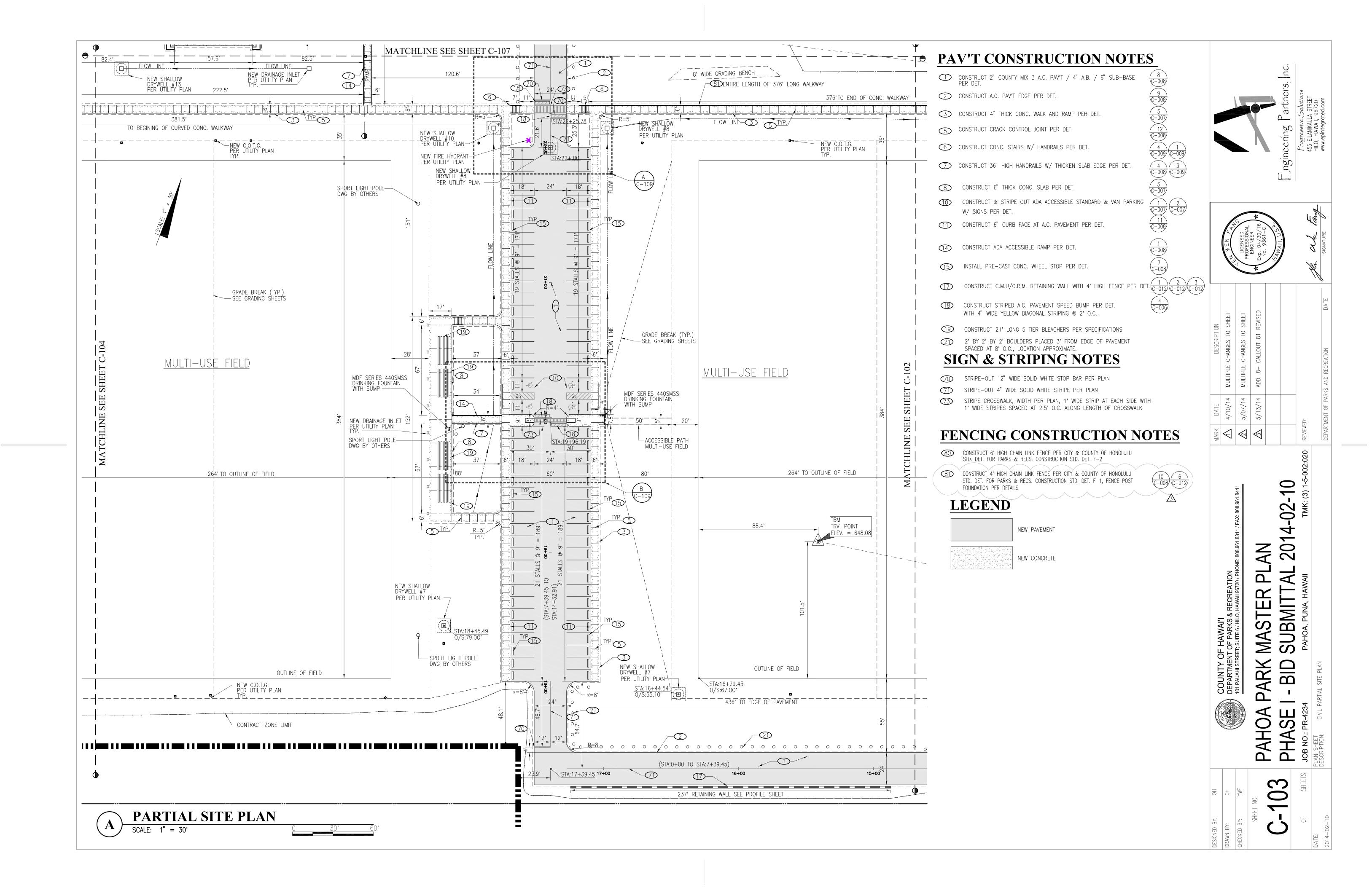
NOT TO SCALE

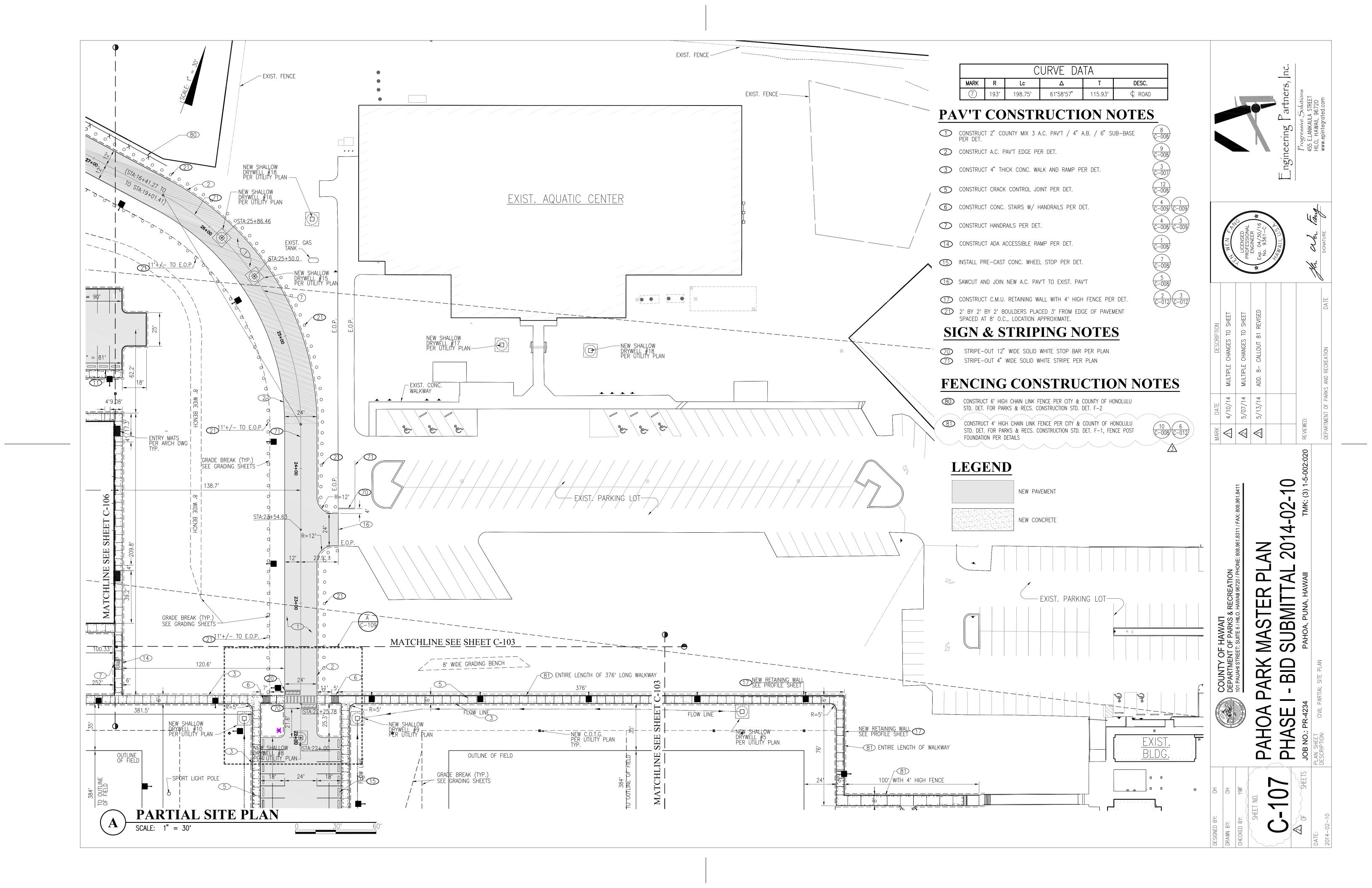
TO JOINT ----

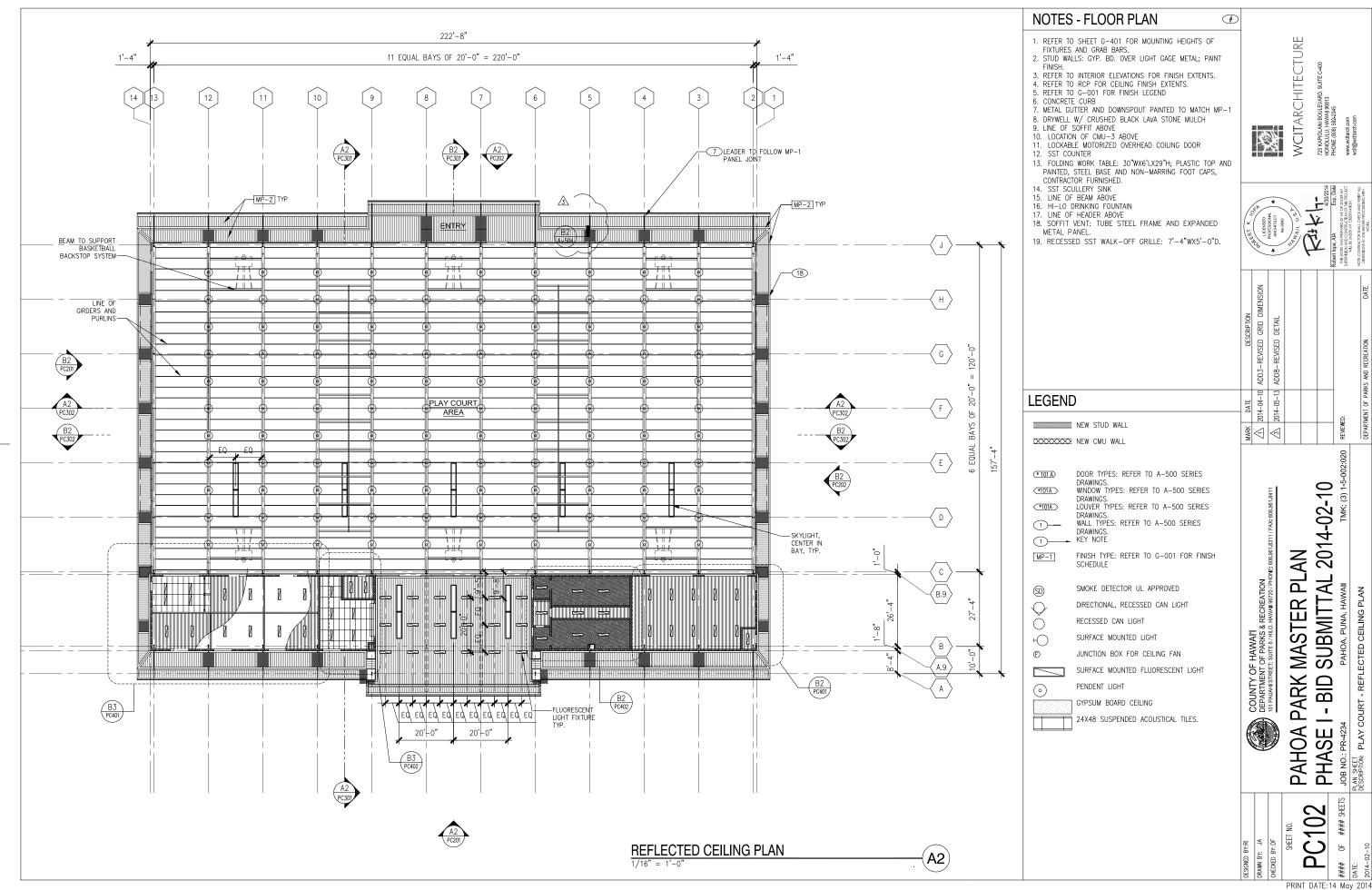
PROVIDE EXPANSION JOINTS @ 50' O.C. MAXIMUM

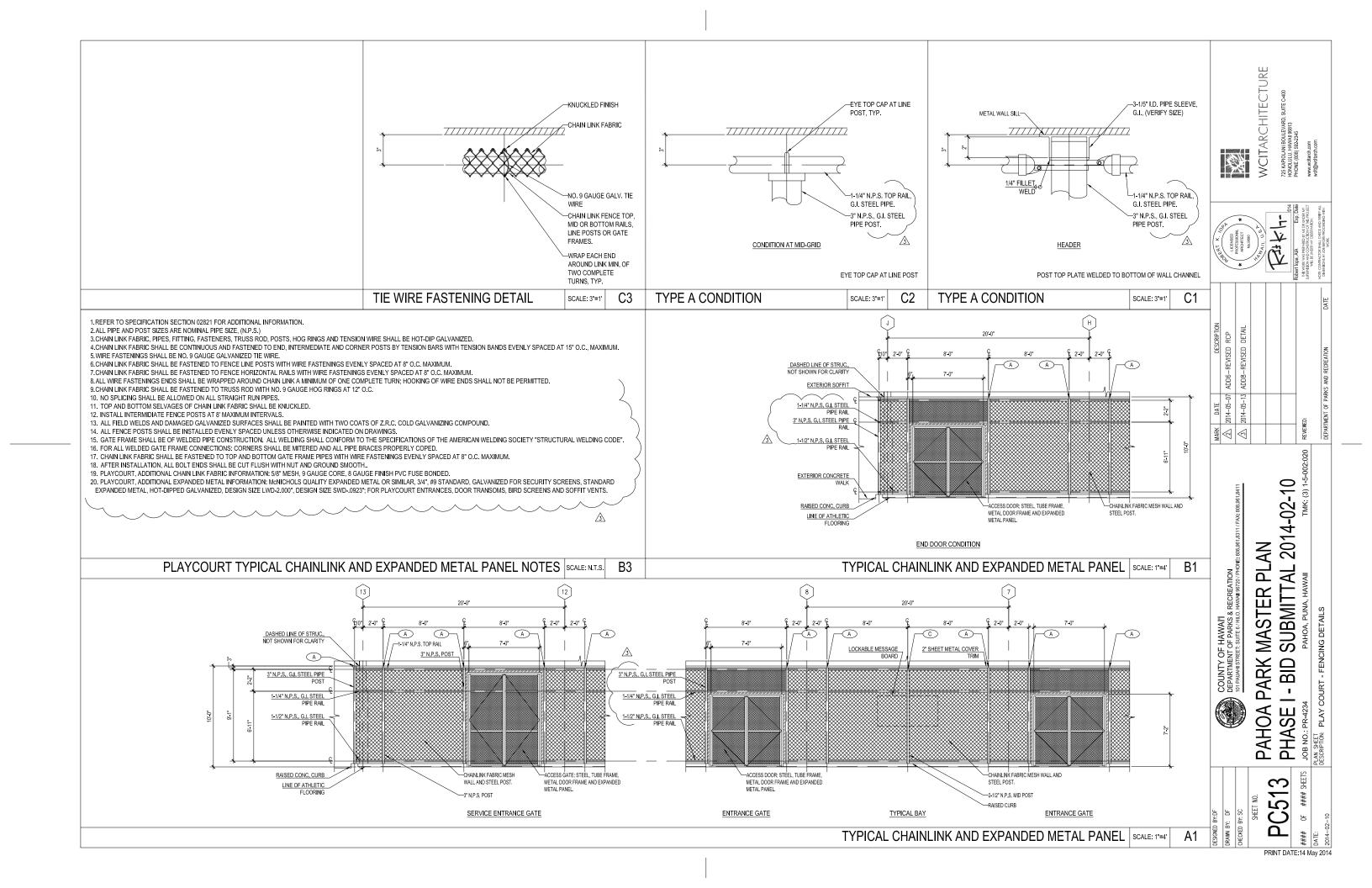
COLINTY OF HAWAI'I	DEPARTMENT OF PARKS & RECREATION	101 PAUAHI STREET; SUITE 6 / HILO, HAWAII 96720 / PHONE: 808.961.8311 / FAX: 808.961.	PAHOA PARK MASTER PLAN	PHASE I - RID SURMITTAL 2014-02-	_ =	JOD IVO FR-4234 FAMOA, FUIVA, MAWAII	PLAN SHEET DETAILS	
HO	НО	YWF	NO.	12	STAAHS			
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET NO	<u>ာ</u>	40	5	DATE:	2014-02-10

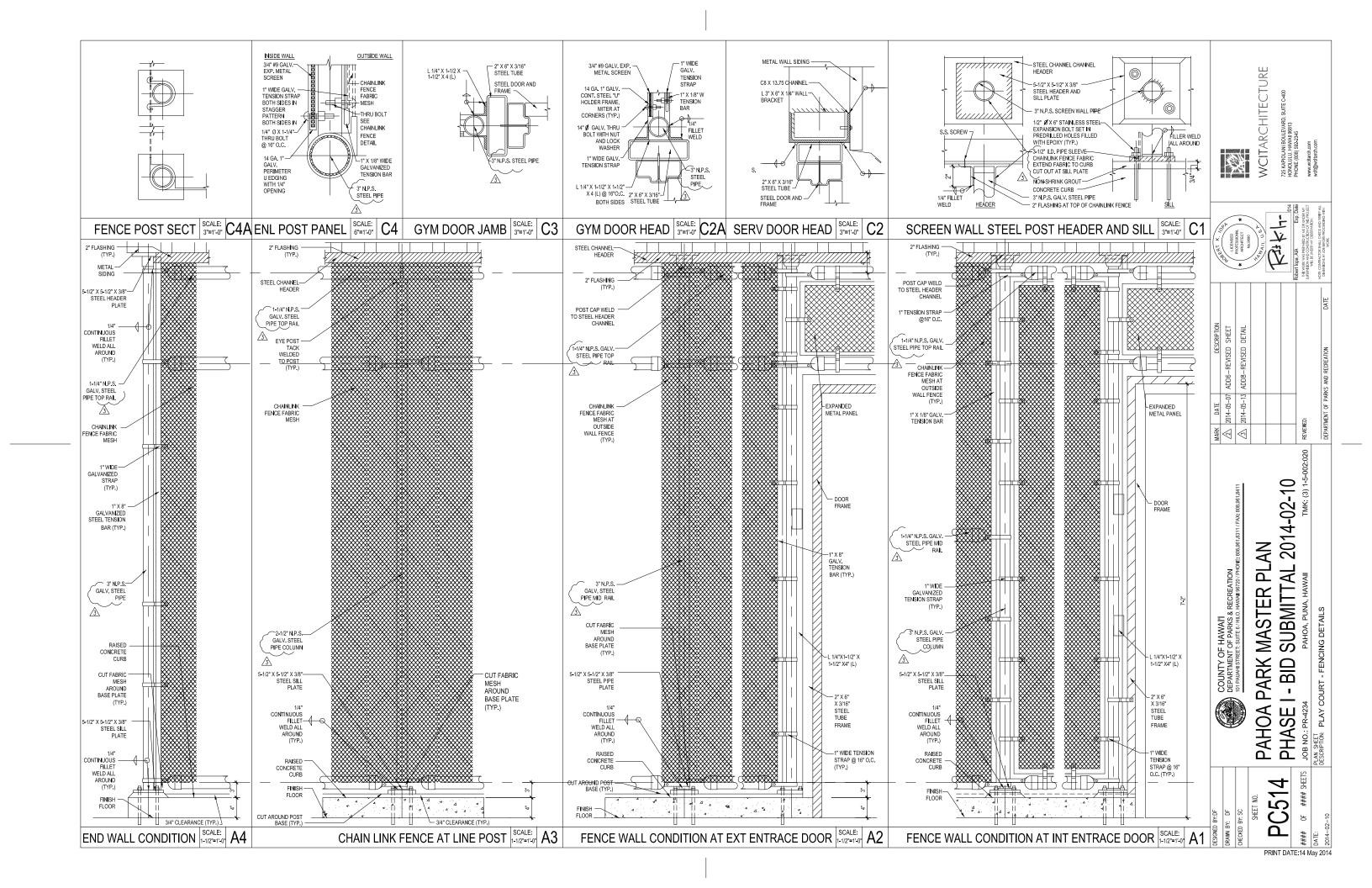
10

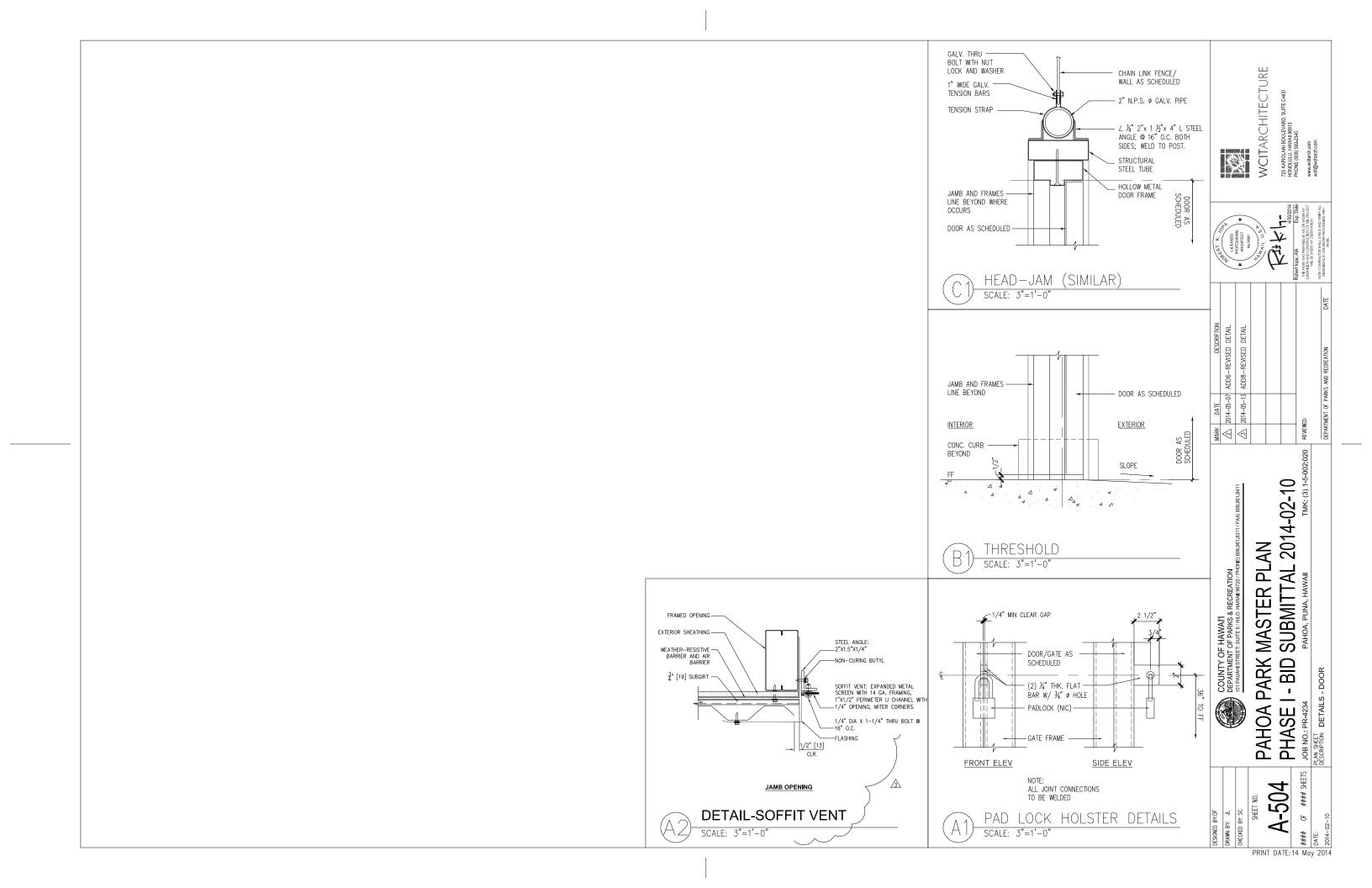


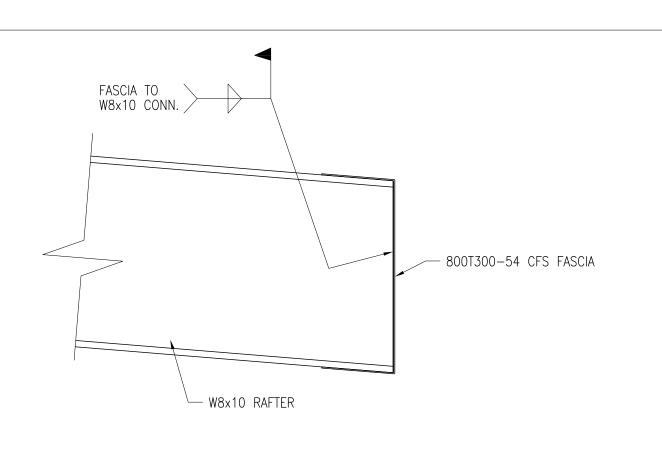


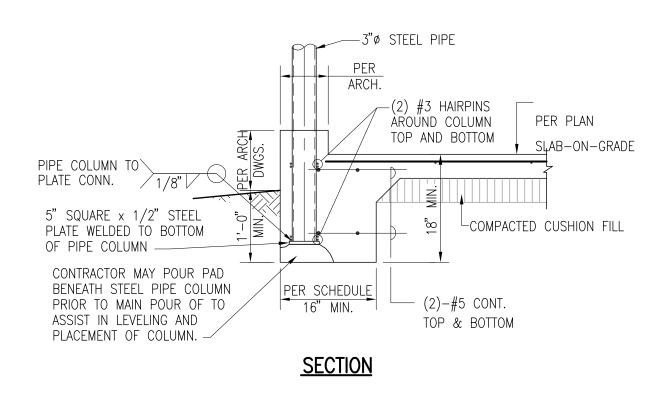


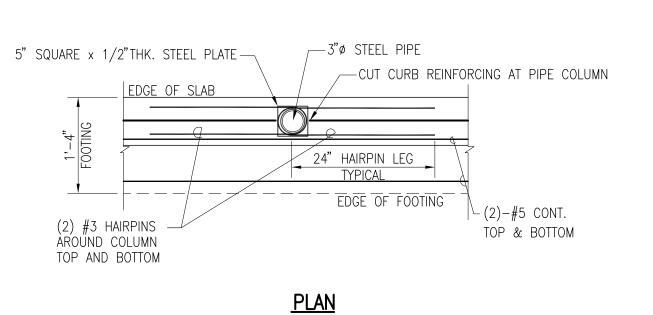


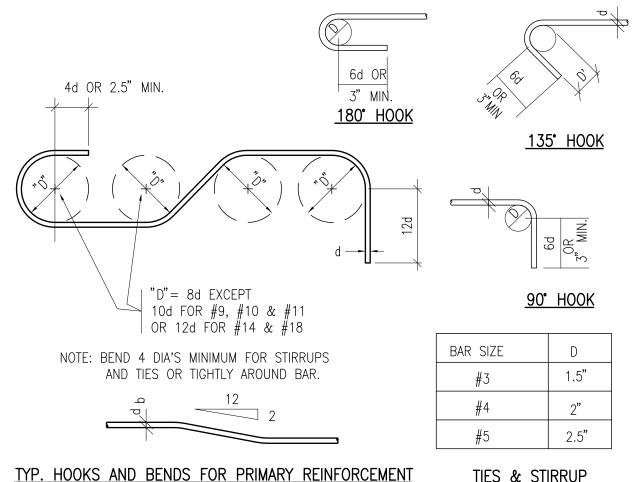






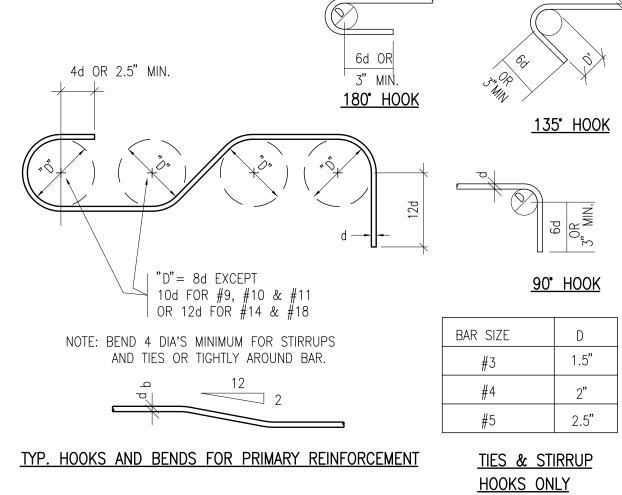


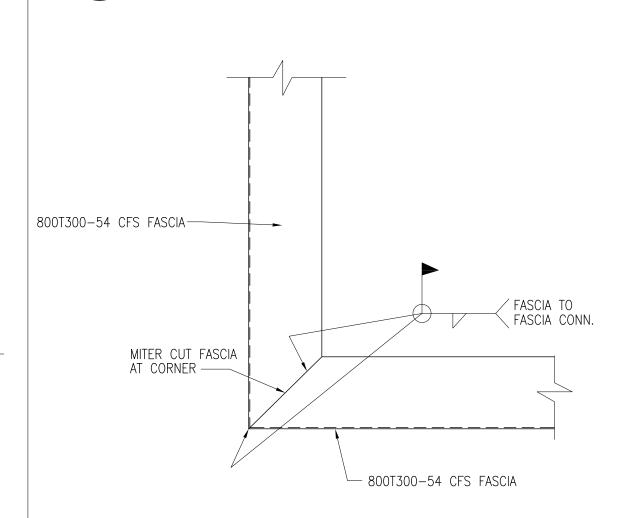






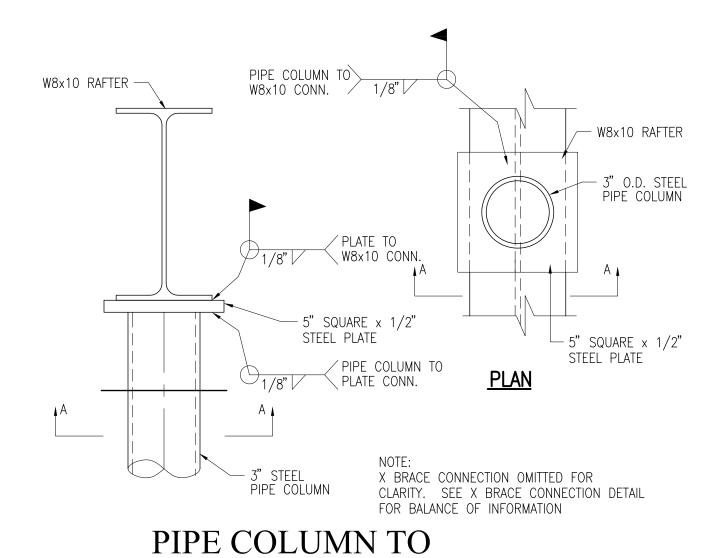
LAP 24" MIN. FOR #4 BARS





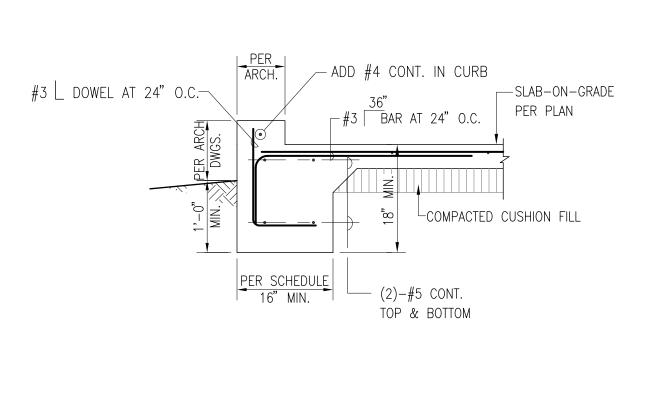
W8x10 RAFTER TO FASCIA CONN. DETAIL

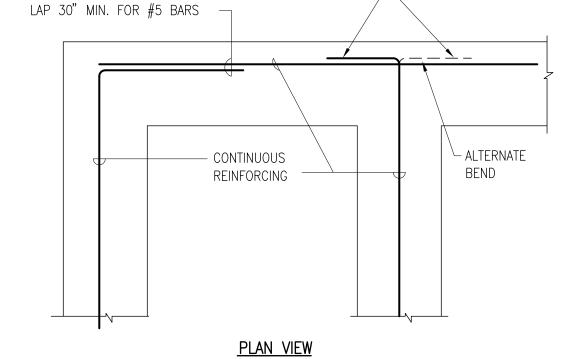
NOT TO SCALE



PIPE COLUMN

FOUNDATION DETAIL



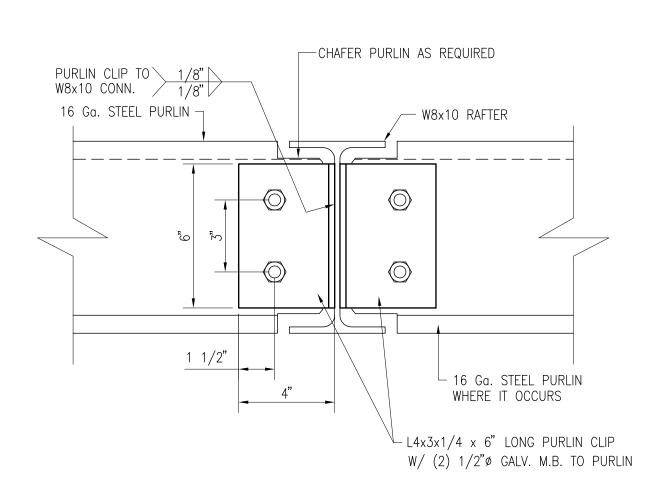


-STANDARD HOOK



- 800S200-54 CFS PURLIN

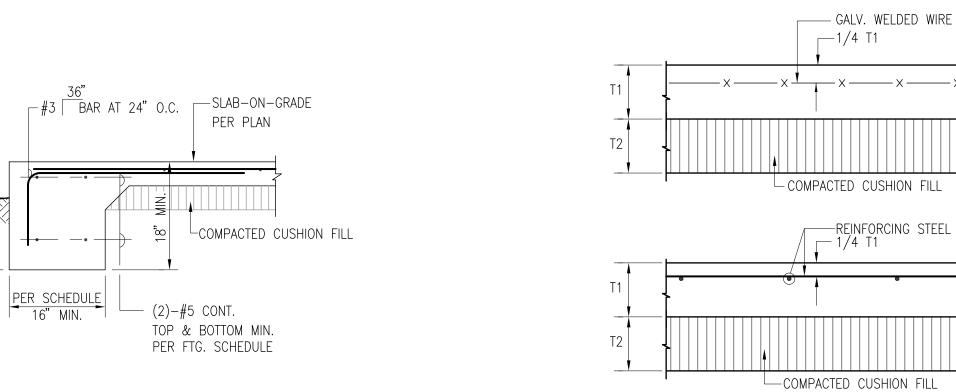
- 800T300-54 CFS FASCIA



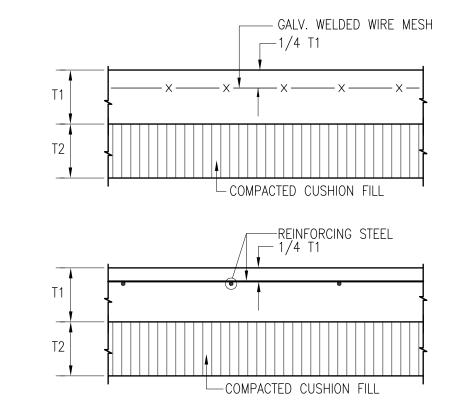
RAFTER CONN. DETAIL

NOT TO SCALE

TYP. FOOTING W/ CURB DETAIL







NOTE:
1. SLAB-ON-GRADE THICKNESS AS PER PLAN. (T1=4" MIN.) 2. CUSHION FILL THICKNESS AS PER PLAN. (T2=4" MIN.)
2. CUSHION FILL THICKNESS AS PER PLAN. (T2=4" MIN.)
3. CUSHION FILL SHALL BE #3 FINE GRAVEL (ASTM NO. 67 GRAVEL)
4. UNLESS OTHERWISE NOTEÖ, MINIMUM CONCRETE COMPRESSIVE STRENGTH, f'c SHALL BE 2500 PSI.

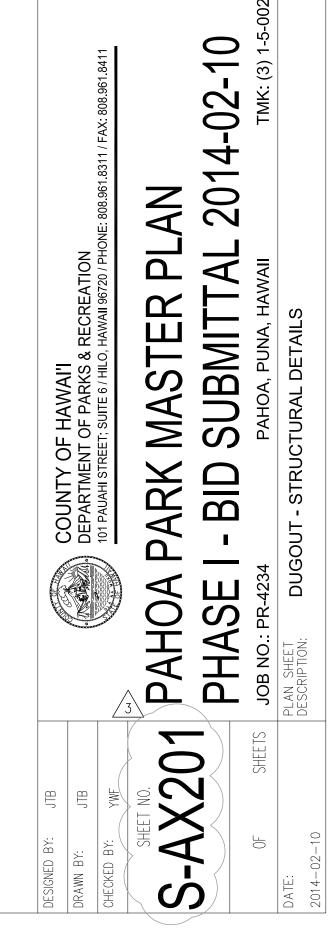


PURLIN TO FASCIA CONN.

PURLIN TO W8x10 CONN. DET. 8 NOT TO SCALE

TYP. FOOTING REINF. DETAIL





Engineering

